Making Sense of Sustainability: Exploring the Subjective Meaning of Sustainability

Introduction

The adoption of a more sustainable lifestyle does not have to be life transforming or reduce quality of life. A number of voluntary small changes, when taken together, could reduce carbon emissions from residential homes by as much as 20%, if enough people are willing and able to do it (Gilligan, Dietz, Gardner, Stern, & Vandenbergh, 2010). Stern (2000) identified three types of environmentally significant individual behaviors that may help to improve environmental quality; making personal financial sacrifices; environmental citizenship behaviors; and private sector household behaviors. The third is about individual environmental behavior taking place as part of people's daily lives (e.g., recycling, energy conservation). What allows us to qualify these activities as sustainable consumption is when they are performed with the intention of causing minimal harm to the environment, and valuable natural resources are consumed responsibly. Unfortunately, individuals regularly fail to make the connection between their use of resources and on-going environmental degradation and a lack of time and money are frequently cited as reasons for inaction (Blake, 1999).

In a comprehensive review of the barriers to pro-environmental behavior authors Kollmuss and Agyeman (2002) advocated the promotion of "pro-environmental consciousness" to remove such barriers. In their writings they acknowledged that the influence of "habit" is often overlooked in pro-environmental literature. Payne (2002) took a similar position, agreeing that the influence of habits is rarely given consideration in environmental education discussions. The present paper describes a study that used inductive methods, to understand how people today ascribe meaning to the concept of sustainability

using their own words and terms; the extent to which habits could indeed act as barriers to environmentally responsible action; and to reflect on the extent to which environmental consciousness is any more pervasive today; 13 years after the publication of Kollmuss and Agyeman's (2002) classic paper.

Conceptual Frameworks

Environmental Consciousness

Environmental consciousness is a multidimensional construct consisting of knowledge (facts, concepts and relationships about nature and its major ecosystem), values, and attitudes towards the environment (Diamantopoulos, Schlegelmilch, Sinkovics, & Bohlen, 2003). Schahu and Holzer (1990) made a distinction between abstract and concrete environmental knowledge. Abstract knowledge refers to knowledge concerning environmental issues: problems, causes, solutions, and so on. Concrete knowledge relates to behavioural knowledge that could be utilized and acted upon. According to Hines, Hungerford and Tomera (1987), abstract knowledge is the most significant type for predicting environmental action. Values are guiding principles, which organise an individual's set of beliefs and attitudes about the world and may guide behavior (Schultz, Shriver, Tabanico, & Khazian, 2004). An environmental attitude refers to an individual's levels of concern or interest regarding aspects of environmental, ecological or energy-saving phenomena (Shrum, McCarty & Lowrey, 1995). In order to be environmentally conscious, individuals need to understand the impact of their actions, and how to resolve it.

Habits

Whilst environmental consciousness may be an important determinant of pro-environmental action, old behavior patterns or habits are considered to be one

of the biggest deterrents to the adopting more environmentally responsible behaviors (Kempton, Boster & Hartley, 1995). Habits are activated and maintained by behaviors repeated in stable contexts; and occur with little or no conscious awareness and conserve cognitive energy that can be utilised elsewhere (Verplanken & Wood, 2006). It is an oversimplification to say that a lack of pro-environmental action may be solely due to a "deficit" in knowledge (e.g., Delicado, 2012; Semenza, Hall, Wilson, Bontempo, Sailor, & George, 2008).

The qualitative interviews took place as part of a larger field study involving environmental behavior change (Verplanken & Roy, in preparation). Purposeful sampling was not employed, as all participants who had taken part in the larger field study were offered the opportunity to take part in the qualitative study. A range of variables considered important in pro-environmental behavior had already been measured at the original point of recruitment to the field study. This additional data source on the respondents provided further data to confirm that this group of people were already conscious of the need for sustainable action and valued the environment (see Table 1).

The interviews took place 6-12 months after each participant's initial involvement. The interviewees in this current study were recruited from both the intervention and control conditions. However, because all participants were aware that the study was about sustainable behaviors, and condition did not impact on the results reported in this paper, we do not further make a distinction between conditions.

Methodology

This study involved eight semi-structured interviews with the individuals (see Appendix I for Discussion Guide). The analysis of the data was conducted

by applying Interpretative Phenomenological Analysis (IPA) to allow for an exploration of idiographic experiences and social schemas (IPA; Smith, 1996; Smith, Flowers & Larkin, 2009; Smith, & Osborn, 2003). The data was regularly and frequently revisited by the research team, in order to validate the developing themes. The use of the qualitative method of enquiry is of particular value in this study as it is particularly concerned with meaning and not making generalised hypothesis statements (Crouch & McKenzie, 2006).

Both Guest, Bunce and Johnson (2006) and Braun and Clarke (2013) state that as few as six interviews can provide the basis for meaningful and useful interpretations and thematic analysis. Between eight and ten participants are viewed as a satisfactory sample for in-depth qualitative research. In addition, a general guiding principle in qualitative research states that sufficient data have been collected once saturation is reached. Saturation occurs when the researcher has reached a point at which no new information or themes emerge in the interviews. In this case, the interviewer was satisfied that no new themes were emanating from the data after eight in-depth interviews.

Participants and Ethical Approval

As part of the larger field study, a questionnaire was sent to participants. A box was added asking people to tick yes or no if they were interested in taking part in a research interview at a later date. Anyone who had expressed an interest in a research interview (37 participants) was subsequently contacted by telephone, with an offer of £20 as an incentive. Those still interested (eight women and four men) were sent a follow-up with a letter and consent form. Four women subsequently withdrew due to various scheduling and re-scheduling difficulties. This left four men aged; 25, 50, 56 and 63 and four women aged; 39, 43, 52 and

65 respectively. The eight respondents were white British and all lived in privately owned homes and one 50 year old male and the two oldest respondents were retired. The study received full approval from the Departmental Ethics Committee.

Interviews

The researcher (DR) who conducted the interviews was a female social psychologist, familiar with socio-cognitive models used to explain sustainable behavior and attitudes towards the environment. The interviews lasted for between 40 and 50 minutes, and were audio-recorded and transcribed. The identities of the interviewees have been anonymised.

Analysis

The interviewer (DR) initially took notes and tried to suspend any pre-assumptions or judgements based on existing literature in this field. This was followed by a re-reading of the transcripts, and identification of recurring themes. At this point psychological concepts were drawn upon to further interpret findings (Biggerstaff & Thompson, 2008). DR proceeded to work together with the other researchers to confirm the analysis and five superordinate themes were identified which were; Mental models of sustainability and impact of unsustainable behavior; the environment is not the only motive for wanting to conserve; unsustainable habitual behavior interpreted as "lack of thought"; generativity, identity and environmental stewardship; and frugal identity and sustainable practices. All quotations are followed by an annotation e.g., "F43" or "M26" etc to indicate whether the respondent was male or female and their respective age.

Results

Theme 1: Mental Models Of Sustainability And Impact Of Unsustainable Behavior

When sustainability was being discussed, a range of activities were mentioned. Recycling behaviors as a concrete action came readily to mind in most of the interviewees. There was also an ongoing emphasis on conservation and more abstract goals, such as saving the planet:

> DR: "What does the word sustainability mean to you?"
>
> F43: "I'm probably pretty ignorant, actually, if I'm honest. It's making sure that we are using resources that we have available to the best that we can, without wastage. That's how I see it. It's things like making sure we recycle everything that we can recycle."
>
> M50: "Well, it conjures up various thoughts; it's obviously something that we consider using and making the best of resources that are available, obviously, recycling."
>
> M62: "Well, probably some, you could call it saving the planet, trying to leave this where we live as nice as the place that I was born into, that's what I try and do for my grandchildren".
>
> F65: "Well, what does it mean to me? I think it's really important to everybody because I think we are wrecking the planet to be honest... I mean I've got friends in Greece, and she rang me up the other day, and she said guess what, we've got snow! And they'd never seen snow. I'm sure it's because we've wrecked the ozone layer, or whatever, or the global warming or something."

There was an acknowledgement that the public could do much more, but also the interviewees had more to learn about how to be sustainable, reflected here, as we see F39 struggling to articulate what it meant to her:

> F39: "OK, I think it's probably being eco-friendly, using resources that we have to good use. I think – um, there's a lot of resources that we can use that we don't use, that we don't know how to use that is just, I mean just like organic food and stuff."

Theme 2: The Environment Is Not The Only Motive For Wanting To Conserve.

It was acknowledged that efforts are made to live more sustainably, but more powerful motivators to save energy exist at a personal level, M56 and M26 both did appear to acknowledge that different motives drive conserving behavior, as the following excerpt demonstrates:

> DR: "What do you do, or what would you like to do to be sustainable?"
>
> M56: "I feel sometimes a little bit of a fraud with this, because I am quite driven by economic considerations, and so I don't think that always the care for the environment is my primary motive."
>
> M26 "I don't particularly like driving so it's an easy choice for me. It annoys me being stuck in traffic, so I quite like walking". "Yeah, I can walk into town, but train fares increasing, I always balance it up, and the only reason I ride a train is for my comfort, and I can do some work when I'm on the train. I don't do it to save money, and I won't do it for the environment, I just do it for my convenience. I think that has to change somehow, how it'll change, I don't really know." [M26]

Theme 3: Unsustainable Behavior Interpreted As 'Lack of Thought'

One defining feature of much everyday behaviors is their habitual nature, i.e., repetitive behavior which occurs without awareness and conscious intent (e.g., Verplanken & Orbell, 2003). Our interviewees, whilst not explicitly mentioning the controlling force of old behavior patterns, or habits, or automaticity, instead consistently attributed unsustainable practices in others and themselves to the "business of life" and to "not thinking".

> DR: "Any prominent barriers to living sustainably?"
>
> M26: "Prominent barrier? Yeah. Yes. I think the business of life. There's other things too, factors at play that prevent me doing it to the full extent I'd like to".

DR: What would be a good way to get people to become more aware of environmental issues?

F43: "It's *thinking* about journeys, you know, made in the car, try to minimise them but that's not practical a lot of the time. But it's *thinking* that way, making sure we use the dishwasher when it's full."

F52: "Well, looking at ways of renewable energy and that kind of thing, make people *think* a bit more about how they are using stuff, electric, gas, everything else, waste, what they are throwing away, what they don't need to, longer."

F65: "People don't put a jumper on; they just turn the heating up. People can afford it. And it's not about the money so much, it's about, well, they don't *think*, do they?"

Theme 4: Generativity, Identity And Environmental Stewardship

The middle-aged respondents expressed quite powerful sentiments in terms of being stewards of the earth and its resources. The strongest views were held by people who were grandparents.

DR: "Why is it important for you to live sustainably?"

F52: "I think the global warming thing; it is a worry, not only for me, but children, grandchildren. I remember reading what Prince Charles said; he can't look his grandchildren in the eye one day and say we knew, but did nothing."

M56: "And so that certainly, you know, OK, maybe not in my lifetime, but when you have grandchildren I guess you start to realise that, you know, not just thinking about this generation, you are actually investing in something that you value a lot, which is the future of your little people."

One 56 year old male participant in this current study described becoming a grandparent as a qualitatively different experience from being a parent, and it was clear that something was "awakened" by the experience. There was a clear need to fulfil "generative needs" (Thiele & Whelan, 2006).

> M56: "I'm more motivated by my grandchildren than I ever was by my children. I think when you have children you are much younger, busier, more carefree, it's happening to you for the first time, but when those new little people come into your life you are older, you see it a lot more in life, and you know life can't be sustained in the way that perhaps you lived it, and for their benefit you want it to change."

A surprising clash in values emerged in older retired adults and there was almost a belligerent attitude towards changing their travel behaviors. People today in their 50's and 60's have more disposable income and with this, more autonomy, and two respondents freely admitted to their unwillingness to sacrifice their holidays:

> M63: "Well, we don't fly very often, but I don't actually get on the plane and think well I'm not helping the planet here, I'm going on my holiday, and like millions of other people, probably haven't *thought* about the way that we treat what we've got."

A lack of thought appears in this narrative as well, and this man indicates his belief that this is a common activity in many people.

Theme 5: Frugal Identity And Sustainable Practices

In an earlier theme it emerged that different motives may be behind pro-environmental behaviors. A similar theme to this relates to family tradition and values around wastefulness. Saving energy for example may take place because people possess frugal values; disliking wastefulness which pre-dates pro-environmentalism. For them, frugal behavior had become natural and routine. Frugal living established in habits, thus seemed to have become a deeply embedded aspect of a personal identity (cf., Verplanken, Friborg, Wang, Trafimow, & Woolf, 2007; Verplanken & Holland, 2002; Verplanken & Orbell, 2003). These comments were made spontaneously when discussing the importance of living sustainably.

> F52: "I don't think, for a long time now I've been quite careful how I use energy and that kind of thing. *I hate waste, always have done, you know*."

> F52: "Yeah, it annoys me when you get free offers on food, and people automatically pick up that other one, and if they don't use it, I mean we get through a lot and what we don't get through the guinea pigs eat, or we compost it. No, I hate it. *I think I was brought up that way*, not to waste food. I don't buy what I'm not going to eat."

Reflecting on existing sustainability research literature we find that the motivation for being careful with resources is posited as being driven by "pro-ecological frugal values" (e.g., Fujii, 2006; Tapia-Fonllem, Corral-Verdugo, Fraijo-Sing & Durón-Ramos, 2013).

Discussion And Implications

Asking a group of people who were environmentally conscious (evidenced by their scores on environmental values and norms) about the meaning of sustainability revealed a number of things: recycling is now an acceptable social norm for many; some do it because it is compatible with their established need to live frugally; and even those committed to environmentalism still falter when it comes to fully embracing a sustainable lifestyle. These individuals are part of a captive audience of people according to Barr, Gilg and Ford (2005) already "sold" on environmentalism and yet it seems environmental consciousness is an insufficient condition to stimulate more environmentally responsible behavior. Instead, our analysis suggests there is a need to tackle the engrained habitual patterns of behavior that are resulting in thoughtless overconsumption. Respondents attributed unsustainable behavior in themselves and others to a "lack of thought". It re-affirms that old established day to day behavioral patterns are still one of the biggest barriers to pro-environmental

behavior, occurring without awareness and conscious intent (Verplanken & Orbell, 2003).

For those not sold on green transport options or buying energy efficient products to benefit the environment, successful motivational messages could make certain outcomes they value more salient; such as saving energy saves money or avoids wastefulness for example. The environment can still benefit, it's just the motivational messages that need to be tailored to concur with certain sets of personal values.

When one looks to draw overall conclusions and the key themes which emanate from the narratives, it is suggested that targeted environmental education programmes are used that bring excessive consumption into public consciousness, and use methods that encourage the public to self-reflect or "think more" about how they go about their day to day lives and its consequences. But how can this be achieved? It is suggested that campaigns depict concrete examples of the lifestyles people should aspire to, drawing on the actions already taken by other countries. Good examples are Sweden and Denmark, who have already made significant progress in reducing overconsumption and environmental degradation.

Habits are hard to change; even when someone makes a personal decision to do so. It takes self-reflection, self-control and persistence to alter engrained behavioural patterns. Intentionality and therefore consciousness requires a capacity to self-reflect. According to Bandura (2006);

> **"***The metacognitive ability to reflect upon oneself and adequacy of ones thoughts and actions is the most distinct human core property of agency"* (p165).

As more people move towards retirement, and possibly also become grandparents, a window of opportunity opens where many old routines end and

could be replaced, and a time for self-reflectiveness begins. More modest consuming can be encouraged to form positive attitudes towards frugality, as they are predictive of resource saving behaviors (Fujii, 2006; Pepper, Jackson & Uzzell, 2009). This may be particularly effective in those with less disposable income, where empowerment may come from the knowledge that doing something as simple as consuming *less* is actually doing *more* and prevents future ecological degradation. This is particularly poignant given the marketing strategies increasingly employed by large car manufacturers that promote the idea that increased manufacturing and consumption can co-exist with the goals of sustainability (de Burgh-Woodman & King, 2013).

Further Research

The sample in this study was taken from the Peterborough area in north east of England and more data would be valuable that represents a wider geographical spread, perhaps sampling from the other parts of England would provide useful comparisons. It would also be useful to collect data from samples which reflect the experiences of people who vary according to socio-economic status; and level of education; as both are known to impact upon sustainable lifestyle choices. Also, whilst this study focused on a very wide array of every day behaviors; a focus on some specific behaviors would be useful such a travel mode choices because different behaviours require different levels of commitment and motives, revealing a lot of inconsistency across different domains (Barr, Gilg & Ford, 2005; Freitas, Gollwitzer, & Trope, 2004).

There are certainly segments of people who are already motivated to carry this agenda forward (Verplanken & Roy, 2013). But in order to be completely environmentally conscious, individuals need to be given help to understand the full

impact of their actions, and how to break old behaviour patterns. Further focused and targeted research to learn how to tackle this identified obstacle of a "lack of thought" and create a more comprehensive pro-environmental consciousness is needed; otherwise the risk is that it becomes yet another "dragon of inaction" (Gifford, 2011).

References

Bandura, A. (2006). Toward a Psychology of Human Agency. *Perspectives on Psychological Science, 1,* 164-180.

Barr, S., Gilg, A. W., & Ford, N. (2005). The household energy gap: examining the divide between habitual and purchase-related conservation behaviours. *Energy Policy, 33,* 1425-1444.

Biggerstaff, D., Thompson, A. R. (2008). Interpretative Phenomenological Analysis (IPA): A Qualitative Methodology of Choice in Healthcare Research, *Qualitative Research in Psychology, 5,* 214-224.

Blake, J. (1999) Overcoming the 'value–action gap' in environmental policy: tensions between national policy and local experience, *Local Environment, 4,* 257–278.

Clarke, V. and Braun, V. (2013). Successful qualitative research: A practical guide for beginners. London: Sage.

Crouch, M., & McKenzie, H. (2006). The logic of small samples in interview based qualitative research. Social Science Information, 45, 483-499.

de Burgh-Woodman, H., & King, D. (2013). Sustainability and the human/ nature connection: a critical discourse analysis of being "symbolically" sustainable. *Consumption Markets & Culture, 16*, 145-168.

Delicado, A. (2012). Environmental education technologies in a social void: the case of 'Greendrive'. *Environmental Education Research, 8,* 831–843.

Diamantopoulos, A., Schlegelmilch, B. B., Sinkovics, R. R., & Bohlen, G. M. (2003). Can socio-demographics still play a role in profiling green consumers? A review of the evidence and an empirical investigation. *Journal of Business Research, 56,* 465-480.

Freitas, A. L., Gollwitzer, P., & Trope, Y. (2004). The influence of abstract and concrete mindsets on anticipating and guiding others' self-regulatory efforts. *Journal of Experimental Social Psychology, 40,* 739−752.

Fujii, S. (2006). Environmental concern, attitude toward frugality, and ease of behavior as determinants of pro-environmental behavior intentions. *Journal of Environmental Psychology, 26,* 262–268.

Gifford, R. (2011). Psychological barriers that limit climate change mitigation and adaptation. *American Psychologist, 66,* 290-302.

Gilligan, J., Dietz, T., Gardner, G. T., Stern, P.C., & Vandenbergh, M. P. (2010). The behavioural wedge: Reducing greenhouse gas by individuals and households. *The Royal Statistical Society,* 17-20.

Guest, G., Bunce, A., & Johnson, L. (2006). "How many interviews are enough? An experiment with data saturation and variability". Field Methods, 18, 59-82.

Hines, J. M., Hungerford, H. R., & Tomera, A. N. (1986/87). Analysis and synthesis of research on responsible environmental behavior: A Meta-analysis. *The Journal of Environmental Education, 18,* 1-8.

Kempton, W., Boster, J. S., & Hartley, J. A. (1995). Environmental Values in American culture. Cambridge, MA, MIT Press)

Kollmuss, A., & Agyeman, J. (2002). Mind the Gap: why do people act environmentally and what are the barriers to pro-environmental behavior? *Environmental Education Research, 8,* 239-260.

Lee, Diane T.F.; Woo, Jean & Mackenzie, Ann E. (2002). The cultural context of adjusting to nursing home life: Chinese elders' perspectives. The Gerontologist, 42, 667-675.

Payne, P. (2002). Post-metatheorizing environmental behaviours in environmental education. *Environmental Education Research 8,* 307–14.

Pepper, M., Jackson, T., Uzzell, D. (2009). An examination of the values that motivate socially conscious and frugal consumer behaviours. *International Journal of Consumer Studies, 33,* 126-136.

Semenza, J. C., Hall, D. E., Wilson, D. J., Bontempo, B. D., Sailor, D. J., & George, L. A. (2008). Public perception of climate change, voluntary mitigation and barriers to behavior change. *American Journal of Preventive Medicine, 35,* 479–87.

Schahu, J., & Holzer, E. (1990). Studies of individual environmental concern: the role of knowledge, gender and background variable. *Environment and Behavior, 22,* 767-786.

Schultz, P. W., Shriver, C., Tabanico, J., & Khazian, A. M. (2004). Implicit connections with nature. *Journal of Environmental Psychology, 24,* 31-42.

Shrum, L. J., McCarty, J. A., & Lowrey, T. M. (1995). Buyer characteristics of the green consumer and their implications for advertising strategy. *Journal of Advertising, 24,* 71–82.

Smith, J. A. (1996). Beyond the divide between cognition and discourse: Using interpretative phenomenological analysis in health psychology. *Psychology & Health, 11,* 261-271.

Smith, J. A., Flowers, P., & Larkin, M. (2009). Interpretative Phenomenological Analysis: Theory, Method and Research: Understanding Method and Application. London: Sage.

Smith, J.A. and Osborn, M. (2003). Interpretative Phenomenological Analysis. In J.A. Smith (Ed), Qualitative psychology: A practical guide to research methods. London: Sage.

Stern, P. C. (2000). Psychology and the science of human-environment interactions. *American Psychologist, 55*, 523-530.

Tapia-Fonllem, C., Corral-Verdugo, V., Fraijo-Sing, B., & Fernanda Durón-Ramos, M. (2013). Assessing sustainable behavior and its correlates: A measure of pro-ecological, frugal, altruistic and equitable actions. *Sustainability, 5,* 711-723.

Verplanken, B., Friborg, O., Wang, C. E., Trafimow, D., & Woolf, K. (2007). Mental habits: Metacognitive reflection on negative self-thinking. *Journal of Personality and Social Psychology, 92*, 526–541.

Verplanken, B., & Holland, R.W. (2002). "Motivated decision-making: effects of activation and self-centrality of values on choices and behavior," *Journal of Personality and Social Psychology, 82*, 434-47.

Verplanken, B., & Orbell, S. (2003). Reflections on past behavior: A self-report index of habit strength. *Journal of Applied Social Psychology, 33,* 1313-1330.

Verplanken, B., & Roy, D. (2013). “My worries are rational, climate change is not”: Habitual ecological worrying is an adaptive response. *PLoS ONE, e74708,* doi:10.1371/journal.pone.

Verplanken, B., & Roy, D. (2015). *Empowering behavior change interventions: A test of the habit discontinuity hypothesis in a field experiment.* Manuscript in preparation.

Verplanken, B., & Wood, W. (2006). Interventions to break and create consumer habits. *Journal of Public Policy & Marketing, 25,* 90-103.